REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 10-16 remain in the application. None of the claims have been amended.

The only issue in this application is the rejection of claims 10-16 as being anticipated by Takahashi (US 4,086,471) under 35 U.S.C. § 102(b). We respectfully traverse and we will point out in the following that the rejection is in error.

The Examiner's detailed discussion of Takahashi is appreciated. There are several statements in the Examiner's discussion which show that the disclosure of the reference may have been misunderstood. We respectfully take issue with the following statements:

- "It is inherent that the ENGINE PARAMETER inputs are value pair with size and type as recited in the claim" – Office action, page 2.

The inputs into the optimum ignition angle decision device (1) of Takahashi are not value pairs. Takahashi shows three inputs, each carrying a signal indicating a value for a defined parameter. The parameters are not discussed in detail, but they are probably regular engine parameters, such as speed, temperature, lambda number, and the like. The device 1 contains a numerical data table or numerical formular derived from a prior engine test. The value for the given input parameter is compared with the corresponding value derived in the engine test and the closest match then provides the result of the decision. The "numerical data table" or "formular" is but a

lookup table (e.g., characteristic table, characteristic curve). The input signal, then, is but a single value. The input signal does not carry a value pair.

- "Figures 2A and 2B show that the definition of a pulse is different during different processing cycles" – Office action, page 2, bottom.

The pulse trains of Figs. 2A and 2B are related. The first pulse train at the top of Fig. 2A shows the measurement pulse as the shaft rotates and the engine hits UDP (upper dead point). The illustration used by Takahashi is for a 4-cylinder engine. The angle difference between the UDP pulses is necessarily 90 degrees. The second pulse train shown in Fig. 2B is the first pulse train divided by M. In the exemplary embodiment, M is chosen 90. The second pulse train, therefore, represents one pulse per degree shaft rotation. The input signal PR into the Engine Ignition Angle Estimating Device 2 represents actual UDP for each piston, while the output signal PP represents the available resolution of the ignition retarding or advancing adjustment.

The pulse trains 1 and 2 are the same in Takahashi for every processing cycle. There is no change in the definition of any of these pulses during different processing cycles. The definition of the pulses remains the same.

- "Takahashi shows in figures 2A and 2B the pulses comprising two parameters T_{PR} and 90°. It is inherent that the pulses can represent different values such as two angular values or two time values" – Office action, page 3.

As mentioned above, the figures do not show pulses that comprise two parameters. The two labels T_{PR} and 90° are related in that the signal T_{PR} represents the upper dead point of the pistons and the label 90° indicates that the signal pulses are based

on a 4-cylinder engine, where the UDP is reached every 90° of shaft rotation. If the engine were a 6-cylinder engine, for example, the indicator would be 60° instead. Most importantly with regard to the claimed invention, there is absolutely no information or teaching in Takahashi that would suggest defining the pulses to represent different values during different processing cycles.

The Examiner is earnestly requested to reconsider the rejection. Neither Takahashi nor any other prior art reference, whether taken alone or in any combination, either show or suggest the features of claims 10 and 11-16.

Reconsideration and the allowance of claims 10-16 are solicited.

Respectfully submitted,

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